Reviewer's report

Title: Activation of the Dopamine 1 Receptor Increases Skeletal Muscle Mass and Force Production

Version: 1  Date: 13 March 2010

Reviewer: Abigail Mackey

Reviewer's report:

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Major Compulsory Revisions
1. Overall: the interpretation of the data in the discussion, conclusion and title is too simplified and far-removed from the findings. Please reconsider, based on the data you report, the interpretation regarding the higher importance of D1R over D5R, and make appropriate changes to the text to reflect your findings more accurately.

2. Address the differences in body mass in both KO and WT models with casting and agonist treatment (in the results section, it is stated that no differences were observed).

3. Address the possibility that the uncasted leg was overloaded during the casting period and consequences this may have, esp with regard to the increase in muscle mass in the non-atrophying muscles.

4. Discuss the apparent mismatch between loss in force and loss in muscle mass.

5. Last paragraph of results: modify the text relating to preservation of soleus muscle mass to reflect the results.

6. The discussion does not examine the results in enough depth.

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Minor Essential Revisions
1. Clarify the function of theophylline

2. Table 2: indicate which leg is un/casted

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Discretionary Revisions

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.
Declaration of competing interests:

I declare that I have no competing interests